

regulating circuit (7) when the resonator is not being triggered by said other control electrode and the resonator (1) is being triggered in the first drive direction by means of the first control electrode (2), and

second means for supplying a feedback signal (k) from the first control electrode (2) to the regulating circuit (7) when the resonator is not being triggered by said first control electrode and the resonator (1) is being triggered in the second drive direction by means of the other control electrode (4).

2.(amended) A piezoelectric drive device as claimed in claim 1, wherein said other control electrode is a third electrode (4), characterized in that

the piezoelectric resonator (1) comprises a first pair of control electrodes (2,3) consisting of said first electrode (2) and a second electrode (3) for triggering the resonator in the first drive direction, and a second pair of control electrodes (4,5) consisting of a third electrode which is said other electrode (4) and a fourth electrode (5) for triggering the resonator in the second drive direction,

the second pair of control electrodes (4,5) is designed for supplying a feedback signal (k) to the regulating circuit (7) when the resonator is not being triggered by said second pair of electrodes and the resonator (1) is being triggered in the first drive direction by the first pair of control electrodes (2,3), and

the first pair of control electrodes (2,3) is designed for supplying a feedback signal (k) to the regulating circuit (7) when the resonator is not being triggered by said first pair of electrodes and the resonator (1) is being triggered in the second drive direction by the second pair of control electrodes (4,5).

4.(amended) A piezoelectric drive device as claimed in claim 1, characterized in that the regulating circuit (7) evaluates the amplitude of the feedback signal (k).

5.(amended) A piezoelectric drive device as claimed in claim 1, characterized in that the regulating circuit (7) evaluates the phase difference between the control signal (S) and the feedback signal (k) by means of a phase control (PLL) circuit.

6.(amended) A piezoelectric drive device as claimed in claim 1, characterized in that the regulating circuit (7) regulates the frequency of the control signal (S).

7.(amended) A piezoelectric drive device as claimed in claim 1, characterized in that the regulating circuit (7) regulates the amplitude of the control signal (S).

8.(amended) A piezoelectric drive device as claimed in claim 1, characterized in that the regulating circuit (7) regulates the frequency of the control signal (S) in a first step, and regulates the amplitude of the control signal (S) in a second step.

11.(added) A piezoelectric drive device comprising a bimodal piezoelectric resonator (1) and means for supplying control signals (S),

wherein said resonator (1) comprises:

at least a first control electrode (2) for triggering the resonator (1) in a first drive direction, and

at least an other control electrode (4) for triggering the resonator in a second drive direction, and

said means for supplying control signals comprises a trigger circuit (6) for supplying control signals (S) to the first and the other control electrode,

characterized in that:

said means for supplying control signals provides the control signals alternatively to the first control electrode or to the other control electrode for producing corresponding movement alternatively in the first or in the second drive direction,

the device further comprises a regulating circuit (7) for regulating the control signals (S),

first means for supplying a feedback signal (k) from the other control electrode (4) to the regulating circuit (7) when the resonator (1) is being triggered in the first drive direction by means of the first control electrode (2), and

second means for supplying a feedback signal (k) from the first control electrode (2) to the regulating circuit (7) when the resonator (1) is being triggered in the second drive direction by

means of the other control electrode (4).

12.(added) The piezoelectric drive device claimed in claim 11, characterized in that said means for supplying control signals comprises a single trigger circuit only, and further comprises first switching means for coupling said control signals (S) alternatively to said first control electrode (2) or said other electrode (4).

13.(added) The piezoelectric drive device claimed in claim 12, characterized in that said first and second means for supplying a feedback signal comprise second switching means for coupling said feedback signals (k) alternatively from said first control electrode (2) or from said other electrode (4).

14.(added) The piezoelectric drive device claimed in claim 12, wherein said other control electrode (4) is a third electrode (4), characterized in that

the piezoelectric resonator (1) comprises a first pair of control electrodes (2,3) consisting of said first electrode (2) and a second electrode (3) for triggering the resonator in the first drive direction, and a second pair of control electrodes (4,5) consisting of said third electrode (4) and a fourth electrode (5) for triggering the resonator in the second drive direction,

the second pair of control electrodes (4,5) supplies a second feedback signal (k) to the regulating circuit (7) when the resonator (1) is being triggered in the first drive direction by the first pair of control electrodes (2,3), and

the first pair of control electrodes (2,3) supplies a first feedback signal (k) to the regulating circuit (7) when the resonator (1) is being triggered in the second drive direction by the second pair of control electrodes (4,5).

15.(added) A piezoelectric drive device as claimed in claim 11, wherein said other control electrode is a third electrode (4), characterized in that

the piezoelectric resonator (1) comprises a first pair of control electrodes (2,3) consisting of said first electrode (2) and a second electrode (3) for triggering the resonator in the first drive direction, and a second pair of control electrodes (4,5) consisting of a third electrode (4) and a

fourth electrode (5) for triggering the resonator in the second drive direction,

the second pair of control electrodes (4,5) supplies a second feedback signal (k) to the regulating circuit (7) when the resonator (1) is being triggered in the first drive direction by the first pair of control electrodes (2,3), and

the first pair of control electrodes (2,3) supplies a first feedback signal (k) to the regulating circuit (7) when the resonator (1) is being triggered in the second drive direction by the second pair of control electrodes (4,5).

16.(added) A piezoelectric drive device as claimed in claim 11, characterized in that the regulating circuit (7) evaluates the phase difference between the control signal (S) and the feedback signal (k) by means of a phase control (PLL) circuit.

17.(added) A piezoelectric drive device as claimed in claim 11, characterized in that the regulating circuit (7) regulates the amplitude of the control signal (S).

18.(added) A piezoelectric drive device as claimed in claim 11, characterized in that the regulating circuit (7) regulates the frequency of the control signal (S) in a first step, and regulates the amplitude of the control signal (S) in a second step.

19.(added) An electric shaver with a rotating and/or oscillating shaving head, characterized in that the shaver comprises a piezoelectric drive device as claimed in claim 11 for driving the shaving head.

20.(added) An electronic device for reading data stored on disc-type data carriers, in particular CDs and DVDs, and/or for writing data on disc-type data carriers by means of a write/read unit, characterized in that the electronic device comprises a piezoelectric drive device as claimed in claim 11 for driving the write/read unit.

REMARKS

In response to the rejection for indefiniteness, claim 1 is extensively revised to comply